

Application No.: 10/564,817
Amendment under 37 CFR 1.111
Reply to Office Action dated February 4, 2009
May 4, 2009

AMENDMENTS TO THE CLAIMS

Please substitute the following claims for the pending claims with the same numbers respectively:

Claim 1 (Currently amended): A data area managing method for an information recording medium, the method is used in an information processor that manages data stored in an information recording area in the information recording medium as a file, wherein

when said information processor accesses [[to]] area management information that manages a free area state and link state of the information recording area in said information recording medium,

access size is changed according to processing ~~content in~~
executed by said information processor.

Claim 2 (Currently amended): The data area managing method according to claim 1, wherein [[a]] the processing ~~content in~~
executed by said information processor comprises:

a free area retrieval processing for retrieving [[an]] a free area from said area management information; and

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a link destination acquisition processing for acquiring a destination to be linked from said area management information.

Claim 3 (Currently amended): The data area managing method according to claim 2, wherein as the access size to said area management information,

when ~~the processing content in~~ said information processor [[is]] executes said free area retrieval processing, a first access size determined from physical characteristics of said information recording medium or a size less than the first access size is used, and

when ~~the processing content in~~ said information processor [[is]] executes said link destination acquisition processing, a second access size that is an access unit of said information recording medium is used.

Claim 4 (Currently amended): The data area managing method according to claim 3, wherein as the access size to said area management information [[in]] at said free area retrieval processing,

~~when access to a location other than a head or end of said area management information is performed, said information processor uses~~ a physical management block size determined from

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physical characteristics of said information recording medium ~~is used when access to a location other than a head or end of said area management information is performed, and when access to the head or end of said area management information is performed, said information processor uses a size equal to or less than said physical management block size is used when access to the head or end of said area management information is performed.~~

Claim 5 (Currently amended): The data area managing method according to claim 4, wherein ~~as the access size in accessing to when said information processor accesses the head or end of said area management information is performed, the access size is a size of said area management information in the physical management block determined from physical characteristics of said information recording medium is used.~~

Claim 6 (Currently amended): The data area managing method according to claim 1, wherein two caches each having a different management block size are provided as area management information caches in said information processor, and by alternatively using said two caches for each different purposes, said access size is

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changed according to the processing ~~content in~~ executed by said information processor.

Claim 7 (Currently amended): The data area managing method according to claim 6, wherein [[a]] the processing content in executed by said information processor comprises:

a free area retrieval processing for retrieving [[an]] a free area from said area management information; and

a link destination acquisition processing for acquiring a ~~destination to be linked~~ destination from said area management information.

Claim 8 (Currently amended): The data area managing method according to claim 7, wherein as an alternative use of said two area management information caches,

when ~~the processing content in~~ said information processor [[is]] executes said free area retrieval processing, a ~~physical management block size determined from physical characteristics of said information recording medium or~~ said information processor uses a first area management information cache having a ~~size less than the size is used~~ physical management block size determined from physical characteristics of said information recording medium or less, and

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when ~~the processing content in~~ said information processor
[[is]] executes said link destination acquisition processing,
said information processor uses a second area management
information cache as an access unit of said information recording
medium ~~is used~~.

Claim 9 (Currently amended): The data area managing method
according to claim 8, wherein as [[the]] an access size to said
area management information ~~which uses~~ in a case where said first
area management information cache is used,

when access to a location other than a head or end of said
area management information is performed, said information
processor uses a physical management block size determined from
physical characteristics of said information recording medium ~~is~~
~~used~~, and

when access to the head or end of said area management
information is performed, said information processor uses a size
equal to or less than said physical management block size ~~is~~
~~used~~.

Claim 10 (Currently amended): The data area managing method
according to claim 9, wherein when ~~access to~~ said information
processor accesses the head or end of the area management

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~~information is performed, by~~ using said first area management information cache,

the access size is a size of said area management information in the physical management block determined from physical characteristics of said information recording medium.

Claim 11 (Currently amended): The data area managing method according to claim 8, wherein said second area management information cache is used only for an exclusive processing [[of]] for reading, and

said first area management information cache is used when [[the]] information stored in said area management information is changed.

Claim 12 (Currently amended): An information processor which accesses [[to]] an information recording medium managing that manages data stored in an information recording area by a file system comprising:

a FAT cache for reading and storing area management information which manages a free state and link state of said information recording area from said information recording medium;

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a volatile memory for holding [[,] data including: a start address of each block, location of the area management information stored in each block on said information recording medium, size of each block, and presence or absence of update, as FAT cache management information for managing said FAT cache by dividing said FAT cache into a plurality of blocks;

a FAT cache controller for referring to and updating said FAT cache management information and controlling a read and change of said area management information to said FAT cache; and

a file system controller for accessing [[to]] the area management information through said FAT cache controller and storing data in the information recording medium as a file.

Claim 13 (Currently amended): The information processor according to claim 12, wherein said FAT cache has ~~each of one or more blocks of two types of blocks of a block having the first access size at least one block having a first access size and at least one block having a second access size; and a block having the second access size,~~ said first access size is a physical management block size determined from physical characteristics of said information recording medium and said second access size is an access unit of said information recording medium.

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Claim 14 (Currently amended): The information processor according to claim 13, wherein said FAT cache controller reads data having the physical management block size determined from physical characteristics of said information recording medium from the information recording medium and holds them retains the read data to a block having the size of the first access size, a size of the data is the physical management block size determined from physical characteristics of said information recording medium, when holding the area management information stored in a location of other than a head or end of said area management information [[,]] ; and

 said FAT cache controller reads data having a size equal to or less than said physical management block size from the information recording medium and holds them, the size of the data is equal to or less than said physical management block size retains the read data, when holding the area management information stored in a location of the head or end of said area management information.

Claim 15 (Currently amended): The information processor according to claim 13, wherein said file system controller accesses [[to:]] a block having the first access size included in said FAT cache through said FAT cache controller when a free area

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retrieval processing for retrieving [[an]] a free area from said area management information is performed, and accesses a block having the second access size included in said FAT cache through said FAT cache controller when a link destination acquisition processing for acquiring a ~~destination to be linked~~ linked destination from said area management information is performed.